

Setting the Stage: Watershed Management and the National Program Perspective

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Objectives

- Background and Update on the Status of the Tribal 319 program
- Examples of some Tribal NPS projects being conducted outside of Region 8
- National perspectives on Watershed Planning as a Critical Tool to Restore and Protect Water Quality

“Ancient History”

- Tribal grants limited to 1/3 of 1%
- Only \$130,000 in 1990
- Still only at \$350,000 in 1998
- Doubled to \$666,000 in 1999
- Still not enough, EPA sought legislative relief

More Recent History

- Beginning in 2000, Congress has removed the 1/3 % limit, but only for one year at a time
- We have raised the Tribal funding from \$666K to \$2.5M, \$6M, and now \$7M
- We have held the \$7M steady even as the total 319 budget has been reduced in 2005 and 2006
- We hope to hold it steady again in 2007

Tribal Projects Get Better and Better

- During the past 16 years, I have observed that the projects developed by Tribes have gotten better and better
- Tribes have more technical sophistication, more well-trained staff, and more leveraging of other sources of funding
- Many projects have moved from single-site to watershed-based

Current Status of Tribal NPS Program

- 114 Tribes eligible to participate in the 319 program (all Regions except 3 & 7)
- FY06 Funding - \$6,896,700
 - Base funding (~\$3.15 million)
 - Watershed project funding (~\$3.75 million) (competitive)
- 40% match
 - 10% if demonstrate hardship
 - 5% in PPG

Base Funding in FY06

- 95 Tribes received ~\$3.15 million in base funding in FY06 (up from 84 Tribes in FY05)
- Distributed as:
 - \$30K (<1,000 sq. mi. or <640,000 acres); OR
 - \$50K (>1,000 sq. mi. or >640,000 acres)
- Regional Breakdown:

R1 – 3	R6 – 2
R2 – 1	R8 – 13
R4 – 2	R9 – 51
R5 – 3	R10 – 20

Base Funding - Eligible Activities

- Range of activities that implement the Tribe's approved NPS management program:
 - Hiring a program coordinator
 - NPS education programs
 - Training and authorized travel to attend training
 - Updating NPS management program
 - Developing watershed-based plans
 - Implementing watershed-based plans

Watershed Project Funding in FY06

- \$3.75 million for watershed projects
- Up to \$150K per project
- 28 Tribal projects funded in FY 06

Watershed Project Funding - Eligible Activities

- Eligible activities
 - Develop a watershed-based plan (up to 20%)
 - Implement a watershed project...
from an existing watershed-based plan
 - Implement other watershed project...
that is a significant step towards solving NPS impairments or threats on a watershed-wide basis
- PAM for Tribes
 - WQ-28: Measures # of Tribes that have developed and begun to implement watershed-based plans

Features of FY06 Watershed Projects

- Watershed-based plan development (>half)
- Strong partnerships
- Leveraging funding
- Specific, measurable goals
- Watershed-wide efforts vs. individual demonstration projects

Examples from Tribes in Other Regions

- Here are some examples of what some Tribes are accomplishing with 319 funds
- In each case, the Tribe has developed or is in the process of completing a watershed plan to guide long-term efforts.
- It is also interesting to see the specific quantitative goals for each of these watershed projects



Torres Martinez Indian Tribe

- Torres Martinez Desert Cahuilla Indians - Coachella Valley in south-central Riverside County and NW Imperial County, CA
- Reservation is ~24,800 acres, with over 11,000 acres under the Salton Sea (12 miles along NW shoreline)
- Intensive agricultural activity and urban development
- Salton Sea home to over 450 species of birds on the Migratory Flyway

Salton Sea



Salton Sea



Salton Sea



Torres Martinez Wetland Project

- Whitewater River (tributary of Colorado River) diverted for many uses before reaching Tribal lands & Salton Sea
- Whitewater River and Salton Sea both on 303(d) list - impaired by nutrients, salt, selenium, pathogens, and bacteria
- Primary source of impairment – agricultural return flows
- TMDLs under development – coordinating with CA

Torres Martinez Wetland Project

- Water transfers to San Diego will cause Salton Sea level to drop at least 25 feet within the next 3 years
- 1 ½ miles of lakebed & several thousand acres of shoreline will be exposed – major dust emissions & exposed contaminants on the Sea bottom

Torres Martinez Wetland Project



Torres Martinez Wetland Project

Project Goal (FY06): Reduce NPS contaminants in Whitewater River by developing a treatment train of wetlands and ponds near the mouth of the Whitewater River (expands current system from 60 to 85 acres)

Includes specific treatment targets (effluent concentration & percent removal targets) for reducing concentrations of TSS, fecal coliform, nitrate, ammonia, phosphate, and selenium

Additional benefits:

- Provides surface stabilization of exposed sediments
- Provides wetland habitat values for wildlife and people

Torres Martinez Wetland Project



Torres Martinez Wetland Project



Torres Martinez Wetland Project



Torres Martinez Wetland Project



Torres Martinez Wetland Project

Developing a watershed-based plan

- In partnership with local water agency
- Coordinate this plan with CA Water Management Plan
- Ultimate goal is to build out 20,000 acres of wetlands across the North End of the Salton Sea (700 to 1,300 acres on tribal property)

Torres Martinez Wetland Project





Upper Skagit Indian Tribe

- NW Washington State – Sedro-Woolley, Skagit Co.
- Historic farming and livestock grazing impacts - decreased riparian vegetation and wetland habitat
- Impaired waters flow through reservation - tributaries to impaired Skagit River (flows into Puget Sound)
 - Red Creek (listed for temperature)
 - Hansen Creek (listed for temperature and fecal coliform)
 - Skagit River (listed for temperature and fecal coliform)
- High priority watershed supporting all 5 salmonid species

Upper Skagit - FY06 Watershed Project

- Fifth 319 grant supporting projects throughout the watershed since 2002
- FY06 project focus – restoring riparian and in-stream habitat
- Implementing activities set forth in a watershed management plan (adopted by county to achieve TMDLs for temperature and fecal coliform)
- Combined funding with Skagit County and WA State Centennial Clean Water Funding (~\$500K)

Upper Skagit - FY06 Watershed Project

Specific activities include:

- *Re-establish 2,600 lineal feet of stream channel
- *Restore 10 acres of floodplain and wetland habitat
- *Remove 25,000 yrd³ of invasive Reed-canary grass
- *Placement of 360 yrd³ of stream bed gravels
- *Placement of 67 pieces of LWD to restore natural stream processes
- *Install 51,000 native plants in the riparian, floodplain, and wetlands
- *Eliminate fish passage barrier

Upper Skagit - FY06 Watershed Project

- County also implementing monitoring program in support of TMDL work
- Specific monitoring parameters and targets include:
 - Fecal coliform reduction target of <50FC/100mL geometric mean within 5 years
 - Temperature reduction target of 10C, <16C 7 day average max within 10 years
 - Target of 20% increase in both juvenile and adult fish recruitment within 5 years

Upper Skagit Indian Tribe



Upper Skagit Indian Tribe



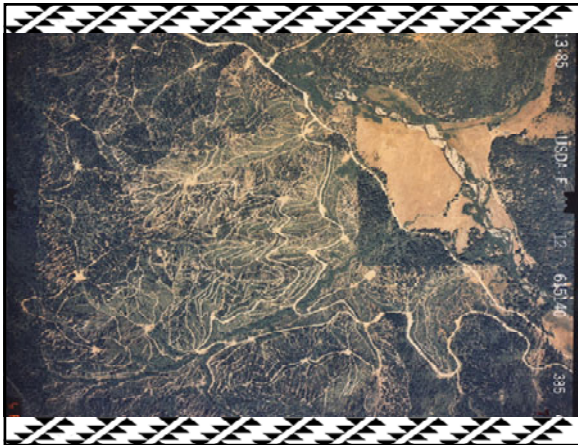


Karuk Tribe of California



Karuk Tribe of California

- Klamath River Basin – 12,000 square mile basin flowing through Southern Oregon and Northern CA
- Majority of ancestral land area within national forests
- Extensive mining (gold, gravel, quartz) and logging
- Left system of roads, culverts, ditches – now subject to failure – erosion and sediment
- Many impacts to water quality: Increase turbidity and temp, impacts fisheries, salmonid migration barriers, interrupted hydrologic patterns, impacts domestic water supply











Karuk Tribe Watershed Restoration Program

- 1996 MOU with Klamath and Six Rivers National Forests
- Established watershed restoration objectives & job training program
- Results of previous decommissioning projects:
 - Removed ~309,224 cubic yards of fill OR
 - 39,224 dump trucks of fill lined bumper-to-bumper for 134 miles!!!

FY06 Bluff Creek Restoration Project

- Bluff Creek Watershed – drains 47,416 acres of steep forested terrain - 9 miles of anadromous fish bearing streams
- Over 80 miles of priority roads
- Linked to restoration of Klamath River – listed as impaired by temperature, nutrients, dissolved oxygen, and sediment (proposed)

FY06 Bluff Creek Restoration Project

- Remove unstable road fill at stream crossings, swales, and other unstable areas to stable road locations – shape to specific slope and compaction requirements
- Re-establish natural hillslope drainage pattern along intervening road reaches
- Resulting in the excavation and stabilization of 9,500 cubic yards* of sediment
- In addition to above 319-funded work, additional partners/funding will result in MUCH higher levels



Karuk Tribe Watershed Restoration Program

Future goals:

- First of 4 projects planned for lower Mid-Klamath region
- Work plan includes a component to develop a watershed-based plan to focus on the lower Mid-Klamath region
- 8-12 years to complete



Tribal NPS Workshops

- 10th year supporting ~4 workshops/year
- Evolved from training on basic program requirements to now having a strong focus on watershed-based planning
- We remain committed to providing training

WATERSHED PLANNING

- The traditional approaches have not enabled us to achieve our water quality goals
- PREMISE: Without quantitative knowledge of
 - (a) the nature and source of the WQ problem,
 - (b) the pollutant load reductions needed to meet WQS,
 - (c) the BMP's that will achieve that pollutant load reduction,you're not ready to implement BMP's that will solve the problem.
- (unless you are very lucky)

9 Components of a Watershed - Based Plan

- A. Identify and quantify causes and sources of the impairment(s) at the **subcategory** level (e.g., X dairy cattle, Y acres needing N management, Z miles of streambank needing remediation)
- B. Estimate needed load reductions, by **subcategory**, to achieve WQS
- ID BMP's needed to achieve the load reductions, and ID the critical areas for implementing the BMP's

Nine Elements (cont.)

- D. Estimate needed technical & financial resources
- E. Information/ Education component
- F. Schedule (who does what, when)
- G. Describe measurable milestones for implementation
- H. Establish criteria to determine if loadings/ targets are being achieved
- I. Monitoring component for above criteria

Tools for Watershed Protection

- Handbook for Developing Watershed Plans to Restore and Protect our Waters
- www.epa.gov/nps/watershed_handbook
- A major work: Too many pages!!!!

Web Sites Galore!!!!!!!!!!!!!!!!!!!!

- www.epa.gov/nps
 - /lid
 - /Success319
 - /Watershed_handbook
 - /Categories.html (management measures and other BMP books for NPS categories)
 - /outreach.html
 - Coming soon! NPS Outreach Toolbox!!!
